



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,808	09/18/2001	Franz Steinbacher	13321US01	8211

7590 03/31/2003

Dean D. Small  
McAndrews, Held & Malloy, Ltd.  
34th Floor  
500 W. Madison Street  
Chicago, IL 60661

EXAMINER

JUNG, WILLIAM C

ART UNIT	PAPER NUMBER
----------	--------------

3737

DATE MAILED: 03/31/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/954,808

Applicant(s)

STEINBACHER ET AL.

Examiner

William Jung

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 9, 10, 12, 16, 17, 20, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by *Bradley et al* (US 6,117,082).

Bradley et al disclose of all claimed invention in claims 1, 13, 16, and 17.

Claim 1: Bradley et al disclose of ultrasound imaging method where first and second transmission of ultrasound beams is introduced to a common scan line. The received echoes from each transmission are combined to form a composite scan line in an ultrasound image (col. 12, line 50 – col. 13, line 12).

Claims 9, 10, 16, 20, and 21: Bradley et al further disclose of weighting factor multiplication when combining multiple signals to form composite scan line (col. 13, lines 38-56).

Claims 12 and 17: In addition, Bradley et al anticipates simultaneous reception of ultrasound multiple echoes along a common scan line for first and second ultrasound transmission and combining the multiple echoes to form a composite scan line (col. 13, lines 57-61).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-8, 11, 18, 19, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Bradley et al* as applied to claims 1 and 17 above, and further in view of *Napolitano et al* (US 6,193,663).

Bradley substantially disclose of all claimed invention in claims 2-8, 11, 18, 19, 22, and 23. Napolitano et al further disclose of scan line compounding combining of scan line where the parameters of the transmission of ultrasound signal includes different transmit and receive aperture, frequency, burst lengths, and transmit focus (abstract; col. 2, lines 1-28). The received signals from different transmission event are combined to form composite scan line. Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to apply the teachings of Bradley et al's composite scan line formation with the teachings of parameter criteria as taught by Napolitano et al to achieve the claimed invention.

6. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Bradley et al* in view of *Napolitano et al*.

Bradley substantially disclose of all claimed invention in claims 13-16. Napolitano et al further disclose of scan line compounding combining of scan line where the parameters of the transmission of ultrasound signal includes different transmit and receive aperture, frequency, burst lengths, and transmit focus (abstract; col. 2, lines 1-28). The received signals from

different transmission event are combined to form composite scan line. Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to apply the teachings of Bradley et al's composite scan line formation with the teachings of parameter criteria as taught by Napolitano et al to achieve the claimed invention.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

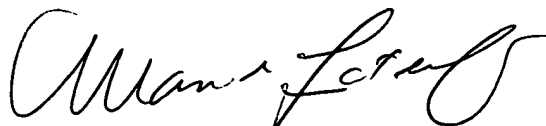
Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Jung whose telephone number is 703-605-4364. The examiner can normally be reached on Mon-Fri 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marvin Lateef can be reached on 703-305-3256. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-0758 for regular communications and 703-308-0758 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

William Jung  
Examiner  
Art Unit 3737

WCS  
March 14, 2003



Marvin M. Lateef  
Supervisory Patent Examiner  
Group 3700